CAAS Audio

Digital Audio Server (DAS)

User Manual

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Digital Audio Server (DAS) Overview

The Digital Audio Server (DAS) is a true reference designed for the discerning Audiophile. The DAS has an extremely low noise floor with greater spacial refinement, dynamic accuracy and fine detail retrieval than any other CD Player or audio server on the market.

The CAAS DAS has been designed to produce the highest audio quality possible. This has been achieved through our custom bespoke 8 wire digital interface. Featuring 176.4k samples per second up-converting parallel DACs, data buffering and ultra low jitter clock, allowing near perfect data re-clocking and bit perfect I^2S type digital signal transfer.

The DAS is an extremely versatile audio server with two USB inputs, network capability through a LAN connection and a subsidiary S/PDIF input for direct connection to the DAC ICs.

The DAS is fitted with a Raspberry PI micro computer and a bespoke ultra low jitter re-clocking system that up-samples digital data to 176.4k samples per second and feeds a parallel arrangement of 16 bit R-2R DACs. The DAS is fitted with four dedicated discrete regulated power supplies for both Left and Right analogue channels and seven separate regulated supplies for the digital sections.

The DAS is primarily an Audio Server and the best performance will be achieved when files are accessed from a USB pen or Hard Disk Drive (HDD). Alternatively digital audio can be streamed from either a NAS, a PC, a tablet or a smart phone over the LAN connection. A CD transport or other devices can be connected to the DAS S/PDIF input, however this input bypasses our bespoke low jitter re-clocking system and therefore is not the primary input.

All music files and data can be accessed through the on screen interface once the DAS has been connected to a TV or monitor (though HDMI). If the TV has HDMI CEC then all the DAS functions can be accessed through the TV remote, alternatively the functionality can be accessed through a LAN interface, tablet or smart phone.

The power supply is a key component in achieving the maximum performance from the audio sections and for this reason the DAS is fitted with a high specification mains filter and two separate transformers, one for the analogue sections and one for the digital sections.

The analogue section of the DAS is DC coupling from DAC ICs to the output and has a very short signal path.

The DAS is fitted with a low power mode that allows the computer to be shut down while the DAC and S/PDIF input are still operational. This is not a standby mode, it is a reduced power mode for use when the Audio server is not required and the S/PDIF input is in use.

CAAS Audio DAS Features

DAS unique features:

- Bespoke software based on the award winning open source XBMC (aka Kodi) media centre.
- Play music from an external 3.5” hard drive or USB Pen (2.5” HDD not supported).
- Stream music over your network from tablets, smart phones and laptops (Windows shares/DLNA/UPnP).
- Two USB, LAN and S/PDIF inputs.
- Sample rates up to 24 bit / 192kHz (16 bit / 96kHz S/PDIF).
- Accepts multiple file formats (WAV, FLAC, AIFF, ALAC, APE etc...).
- HDMI output for navigating music files on a flat screen TV.
- HDMI CEC control via TV remote (CEC enabled TVs only).
- Alternate control through networked devices (smart phones, tablets, web browser etc...).
- Parallel 176.4k up-sampling R-2R DACs.
- 11 regulated power supplies including 4 dedicated discrete regulated supplies.
- Separate transformers for the analogue and digital sections.
- DC coupled output.
- 220mm (W), 260mm (D), 65mm (H), 2.6kg.

CAAS Audio DAS Specification

Frequency Response	20Hz to 20kHz (+/-0.1dB) DC Coupled
Maximum Output	2.2V RMS
Output Impedance	110ohm
DAC THD	< 0.03% @1kHz (0dB level, 2V RMS output)
Crosstalk	<-90dB
Output SNR (A-WTD)	~100dB
Output DC Offset	+/-20mV
Power Consumption	< 20W
Mains Voltage	220V to 240Vac
Fuse Rating	T500mA (slow blow)
Analogue Outputs	1 x Pair RCA (L/R Fixed Line Level DAC outputs)
Digital Inputs	1 x RCA (S/Pdif) 2 x USB (connect to hard drive or PC)
Network Inputs	1 x RJ45 LAN (wired connection)
Video Output	1 x HDMI (with CEC capability)
DAC	Parallel 176.4k up-sampling 16bit R-2R DACs
Mains Transformers	2 x 15VA (toroidal)
Dimensions	65mm high, 220mm wide, 260mm deep
Weight	2.6kg

Subject to change without notice.

Supported Devices / Peripherals

WiFi adapter: EDiMax EW-7811Un
Recommended Apps: Yatse (for android) & Official XBMC Remote (for iOS)

Important Precautions (Mandatory)

Water and moisture
The DAS should not be used near water. Care should be taken not to allow the DAS to fall into water or liquids and ensure liquid is never spilled onto or into the DAS.

Power sources
The DAS voltage and current rating is indicated on the rear panel of the unit. This will state either 240Vac or 120Vac. Two T1A time-lag fuses are included for 120V versions and two T0.5A fuses are included for the 240V versions. The input frequency rating of the power supply is 50Hz to 60Hz. The DAS typically draws less than 20W during the normal operation. Please verify that the indicated voltage requirement is consistent with the mains voltage in your location.

Grounding
We provide a standard IEC AC main cable that fits into the rear of the DAS. The DAS is equipped with an earth ground provided by this cable and connection. DO NOT defeat this ground, the DAS should always be grounded. It is dangerous to operate the DAS without a ground connection. Additionally the DAS may not function correctly without a ground connection.

Power and Signal cables
The DAS is supplied with a power cable that meets UK legislated requirements. As with all audiophile equipment the power cable should be the last item attached and the first item removed whenever equipment is added or removed from the audio chain. Any cables (power or signal) should never be connected or removed while the equipment or supporting equipment is powered up. Failure to pay attention to this precaution may result in damaged equipment.

Ventilation
Audio equipment may run hot. The installation must allow for this heat dissipation. We recommend free air circulation around the product. This can best be achieved by leaving at least a 20cm gap around the unit. The DAS should not be installed or situated near any other source of heat (e.g. central heating radiator or on top of an amplifier).

Servicing
To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the DAS. Please do not open the DAS. There are no user serviceable parts inside the DAS. Opening the DAS will invalidate any warranty offered. Servicing must be referred to qualified service personnel only.

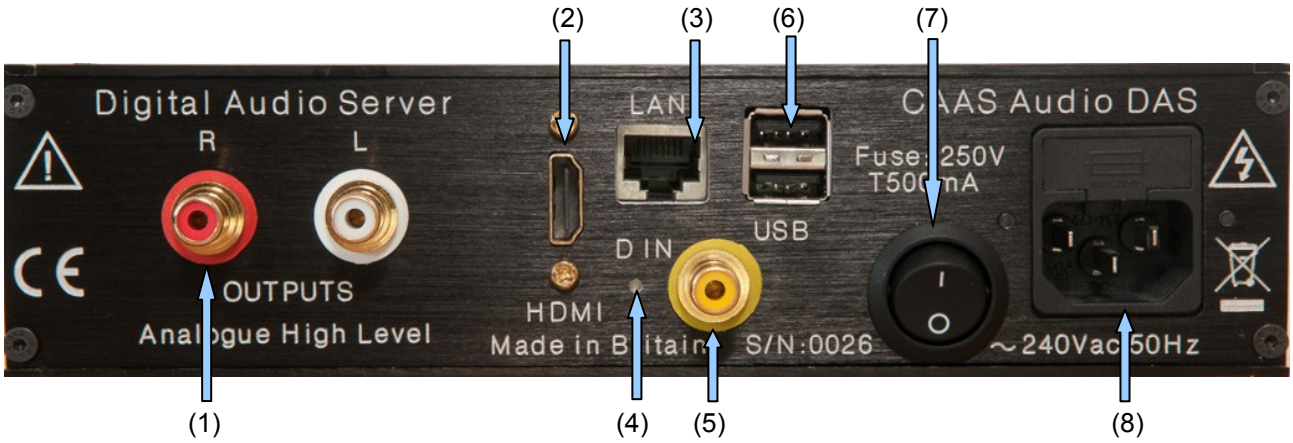
Burn in period
When you first power up the DAS, you may not experience the maximum performance of this audio server, the DAS can require a burn in period of up to 100 hours. Additionally the performance of the DAS can vary slightly over its warm up period.

DAS Front Panel Explained

(1) Input select button (toggles through inputs).
(2) **AS** LED (Audio Server input selected).
(3) **DI** LED (Digital S/PDIF input selected, D IN on the rear panel).

The selector switch on the front panel cycles through the inputs. By pressing and releasing this button, you can toggle through the inputs, audio server (**AS**), S/PDIF input D in (**DI**) and then back to **AS** etc... Audio server (**AS**) is the default turn on selection.

DAS Rear Panel Explained



1. The DAC output is a fixed line level output straight from the DAC. **DO NOT CONNECT STRAIGHT TO A POWER AMP!**
2. HDMI should be connected to a CEC enabled TV, using a CEC enabled cable.
3. LAN allows the Audio Server to be networked and accessed through the network, web server, tablet and smart phone.
4. Factory reset button.
5. D IN is an S/PDIF input, selected through the front panel as the **DI** selection.
6. USB are two USB ports mainly used for external storage devices. DO NOT CONNECT A 2.5 INCH USB POWERED HDD to these ports.
7. Power switch.
8. Mains power input and Fuse.

Using & Controlling the DAS

The Digital Audio Server is primarily an audio server. The audio server has an S/PDIF input at the rear that can be selected by the **DI** selection on the front panel. This allows third party digital sources to be connected to the audio server, such as CD transports. It should be noted that by far the best audio quality playback will be achieved through using the audio server as it is intended, that is as a dedicated audio server (the **AS** input selection on the front panel) and not through third party connected devices. Additionally the S/PDIF input bypasses CAAS Audio's low jitter re-clocking system, so this advantage can not be utilised with this input.

TV CEC Control

If your TV is CEC enabled you can control the audio server using the TV remote:

1. Connect a CEC enabled HDMI cable between the TV and the HDMI port on the rear of the audio server. (Note: On some TVs only HDMI port 1 is CEC enabled).

2. If the DAS does not recognise the CEC connection, turn both the TV and audio server off and then back on again whilst the HDMI cable is connected.

3. Once CEC has been recognised, you can scroll through the music files stored on the USB media. Play track, pause, stop etc..

Network Control

You can control the audio server from other devices connected to your network, such as a smart phone or tablet. To do this you must first install **Yatse** or **Official XBMC Remote** on your smart device. The procedure to do this is highlighted below in the **Installing & Setting up XBMC & Yatse Remote Apps** section.

Web Interface

The web interface can be accessed on port 80 by opening a web browser and typing the DAS IP address followed by :80 (e.g. ://192.168.1.14:80) into the URL bar. Alternatively you may be able to type the host name followed by :80 (i.e. http://caasaudio:80). Note: this may not work with a lot of routers.

The web browser interface can be used to navigate around the HDMI connected TV interface or brows though and play tracks from your music library, once built (see section **Building an XBMC Music Library**).

Notes:

- **The DAS IP address** will pop up in the right hand bottom corner of the TV on DAS boot up. Please make a note of this IP address (the DAS must be networked first for this to happen).

- **The DAS IP address** can also be found through other techniques, such as downloading the App **Fing** to your smart phone / tablet. You can then run Fing and it will display the IP addresses of all devices connected to your network. Alternatively if CEC is enabled on your TV, you can use the TV remote to scroll to **System** → **System info** where the IP address will be displayed.

Recommended DAS Shut down procedure

The DAS should always be shut down in a controlled manner just as you would a PC or laptop. The Audio Server should always be shut down via the power icon in the lower left corner of the screen:

1. Select the power icon in the bottom left corner of the screen (using either a CEC enabled TV remote, smart phone, tablet or web interface).

2. Then toggle down and select **Power off system**.

3. The computer will then power down and you can then turn the DAS off at the rear.

The DAS can be run in a reduced power mode, when using the S/PDIF input (and not the Audio Server functionality). This is achieved by powering the computer off as outlined above. The DAC and S/PDIF input will remain powered up until the mains supply is turned off at the rear of the unit.

Quick Start (Playing Music Quickly)

DAS set up time can be reduced and music can be played reasonably quickly with reduced functionality and without building music libraries. To access all the functionality, sources will need to be added to XBMC and music libraries will need to be built. Adding sources and building libraries can take a large amount of time. The procedure to achieve this is explained in the following sections. The next few pages are designed to help you play music quickly (with reduced functionality).

Adding Music Files to your USB Storage

We recommend you use EAC (exact audio copy). Download and install EAC onto your PC / Laptop and RIP your CDs using EAC (We recommend WAV or FLAC format). Then simply plug your USB storage into your PC / Laptop and copy the music files across. Once finished, remove the USB device and plug it in to the USB socket on the rear of the DAS. The DAS should then auto-detect the drive and you're ready to go. See the next section for accessing these music files.

Note: Use either 3.5inch externally powered HDD or USB storage pen, DO NOT USE 2.5 INCH USB POWERED HDD this will not work.

Playing USB Device Music Files (Quickly)

This can be done either using a HDMI TV and CEC remote, a web browser or smart device App:

1. **Make sure the DAS is turned OFF** (Inserting or removing a USB device while the DAS is turned ON may cause a reboot).

2. Insert Storage device in one of the rear USB ports (use either 3.5inch externally powered HDD or USB storage pen, **DO NOT USE 2.5 INCH USB POWERED HDD** this will not work).

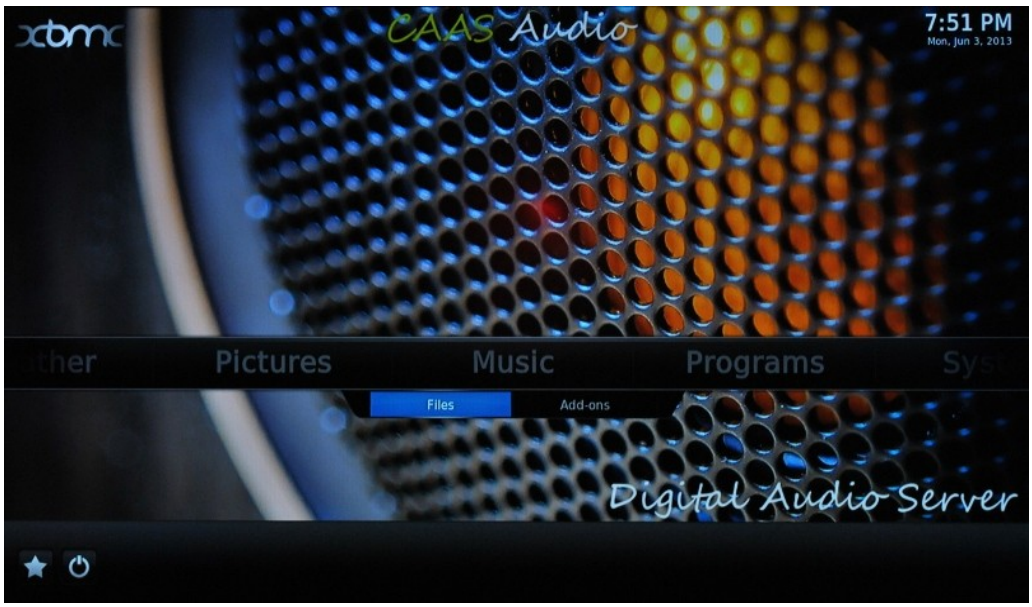
3. Connect a CEC enabled TV to the HDMI connection on the rear of the DAS (while the DAS is turned off). See the following section for TV CEC control.

4. **Now turn the DAS ON** (The DAS will take approximately 30 seconds to boot. Once booted the XBMC menu screen will be displayed).

5. The DAS screen can be navigated either by using a CEC TV remote control, a web browser, tablet or smart phone.
   - The DAS will need to be networked if a web browser or smart device is to be used (see section **Networking the DAS**).
   - If a smart device is to be used, the appropriate remote control App will need installing on your smart phone / tablet (see section **Installing & Setting up XBMC & Yatse Remote Apps**).

6. Scroll sideways and select **Music** → **Files**.

7. You will have a choice of media drives. Select the storage device. This will then give you a list of artists and albums, select the track you wish to play from here (see screen shots below).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CAAS Audio
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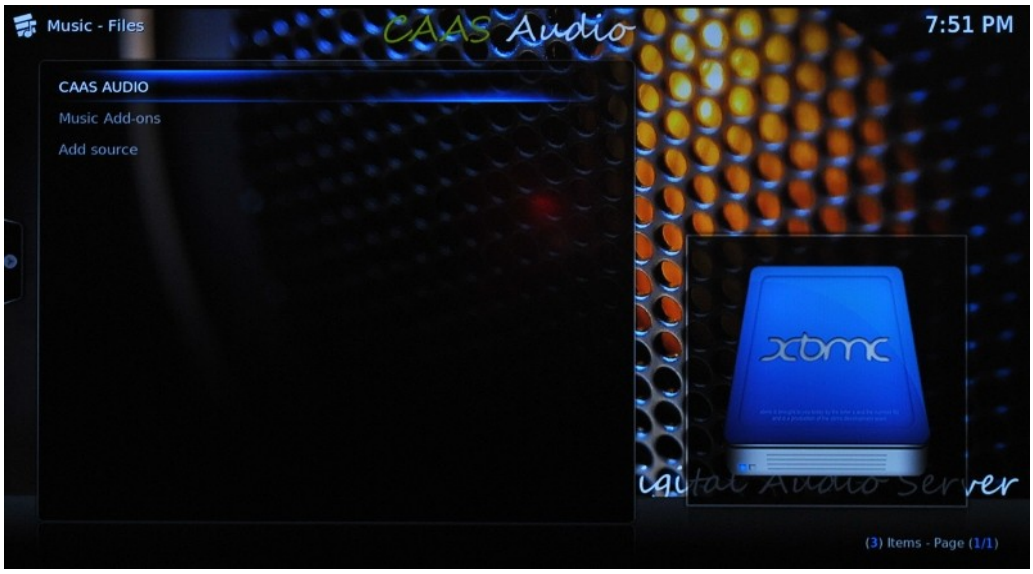
Mon, Jun 3, 2013
Pictures
Music
Programs
Files
Add-ons
Digital Audio Server


Music - Files
CAAS Audio
7:51 PM
CAAS AUDIO
Music Add-ons
Add source
xbmc
(3) Items - Page (1/1)

Music - Files - Björk - Debut
CAAS Audio
7:51 PM
01. Björk - Human Behaviour 04:12
02. Björk - Crying 04:50
03. Björk - Venus As A Boy 04:42
04. Björk - There's More To Life Than This (Recorded Live At The ... 03:21
05. Björk - Like Someone In Love 04:33
06. Björk - Big Time Sensuality 03:56
07. Björk - One Day 05:24
08. Björk - Aeroplane 03:54
09. Björk - Come To Me 04:55
10. Björk - Violently Happy 04:59
11. Björk - The Anchor Song 03:40
12. Björk - Play Dead 03:56
Human Behaviour - (01:59 / 04:12)
Björk - Debut
(12) Items - Page (1/1)
Total Duration (52:22)

Playing Music from a Network connected device (Quickly)

UPnP and SMB servers can be accessed quickly (with reduced functionality) for near instantaneous network music play, however the interface may not look pretty, it will likely just list file names.

For full album art a music library will need to be built (see section **Building an XBMC Music Library**).

Playing NAS Music with a HDMI TV Connected

Music can be played quickly from a networked device with reduced functionality by doing the following:

1. The DAS will need to be networked (Connect the DAS to your router via a standard LAN cable).
2. Connect a HDMI TV to the DAS.
3. Turn the DAS ON (The DAS will take approximately 30 seconds to boot).
4. Navigate on the TV using either a CEC enabled TV remote, web browser or smart device running either **Yatse** (Android) or **Official XBMC Remote** App (iOS Apple), see section **Installing & Setting up XBMC & Yatse Remote Apps**.
5. Select **Music → Files → (UPnP Media Servers or Windows network SMB)** and navigate to your desired storage.

Playing NAS Music with NO TV connected

Music can be played quickly from a networked device with reduced functionality by doing the following:

1. The DAS will need to be networked (Connect the DAS to your router via a standard LAN cable).
2. Turn the DAS ON (The DAS will take approximately 30 seconds to boot).
3. If using an Apple smart device, Install the **Official XBMC Remote** App on the Apple device (see section **Installing & Setting up XBMC & Yatse Remote Apps**).
    - Select **Music** (top left corner).
    - Then select the **Folder** icon (at the bottom).
    - You should then have the following choices: **Music Add-ons, UPnP Media Servers (Auto-Discover) and Windows network (SMB).**
    - Choose the appropriate protocol for your network and navigate to the desired storage.
    - The albums, artists and songs should all be listed and will play by selecting them.
5. If using an Android smart device, Install the **Yatse** App on the Android device (**Installing & Setting up XBMC & Yatse Remote Apps**)).
    - Select **Menu** (3 lines in the top left corner).
    - Then select **Files / Playlists.**
    - The scroll sideways across to **Audio Files.**
    - You should then have the following choices: **Music Add-ons, UPnP Media Servers (Auto-Discover) and Windows network (SMB).**
    - Choose the appropriate protocol for your network and navigate to the desired storage.
    - The albums, artists and songs should all be listed and will play by selecting them.

DLNA / UPnP Audio Interface, Networking & File Sharing

The DAS can connect to a home network and play audio files stored on DLNA / UPnP enabled devices.

The DAS can be connected to a TCP/IP network via a wired connection. Network connection enables the DAS to play audio files stored on DLNA / UPnP servers, computers and network drives. The DAS has a standard Ethernet socket fitted on the rear panel. For wired network connection this socket should be connected to a spare Ethernet socket on your network router.

Networking the DAS

1. Connect a CAT5 LAN cable to the LAN port on the rear of the DAS and the other end to a free LAN port on your router.

2. The DAS should now be networked. The DAS is DHCP aware by default, so if connected to a DHCP enabled router (most are), your router will assign an IP address to the audio server.

3. You should be able to access the audio server through the assigned IP address. If you download **Fing** for your smart device it will scan all your network attached devices and return their IP address etc.. this can be quite useful.

4. Alternatively you can view / adjust the IP address and other setting in the **CAAS Audio Configuration** window on your TV (see the section **CAAS Audio Configuration set up**).

Note: For UPnP and SMB protocols to operate correctly, the DAS will require the right time and date. As soon as the DAS detects an internet connection, it will automatically update it time and date. This may take a minute or two.

If the DAS is connected to a network that does not have an internet connection and the DAS time and date are wrong, then SMB and UPnP protocols may not function correctly.

Windows Network (SMB) file sharing

This is the preferred method of sharing files between the DAS and Windows network devices or NAS.

1. Connect the network cable between the DAS and your router.

2. Ensure that file sharing is enabled on your window device (PC / Laptop) or NAS.

3. On the DAS: You will need to add the shared device as a media source. You can do this by selecting **Music → Files →Windows network (SMB)** and then selecting the appropriate discovered device.

4. Alternatively by selecting: **Music → Files → Add source→ Browse → (and scroll down to) Windows network (SMB).** See screen shot below.

5. Then select your workgroup / shared folder and then select OK. You may then need to select OK on the next screen as well.

You should now be able to access / view your shared files as you would a local device / drive from the main menu. From the Home screen, select **Music → Files** and your shared device should be listed.

Note: You may be prompted for a user name and / or password. This will be your router / system password.

Accessing a UPnP Network Device

This option is only to be used to access other UPnP devices (e.g. file sharing between two XBMC devices). The procedure is fundamentally the same as SMB sharing:

1. Firstly you need to enable UPnP on the source XBMC device (the files you wish to share / access).

2. On the DAS, you will need to add the source device as a media source: This can be done easily on a CEC connected TV by selecting **Music → Files → UPnP Media Servers (Auto-Discover)** and then selecting the appropriate discovered device.

3. Alternatively by selecting: **Music → Files → Add source→ Browse → (and scroll down to) UPnP Devices.** See screen shot below.

4. Select the source that you wish to share. You may wish to re-name the source.

You should now be able to access / view your shared files as you would a local device / drive from the main menu. Select Music → Files and your shared device should be listed.

Installing & Setting up XBMC & Yatse Remote Apps

There are many XBMC control Apps on the market. Some will work well and others will not. We have designed our software to work with **Yatse** for an android operating system and **Official XBMC Remote** for an Apple (iOS) operating system.

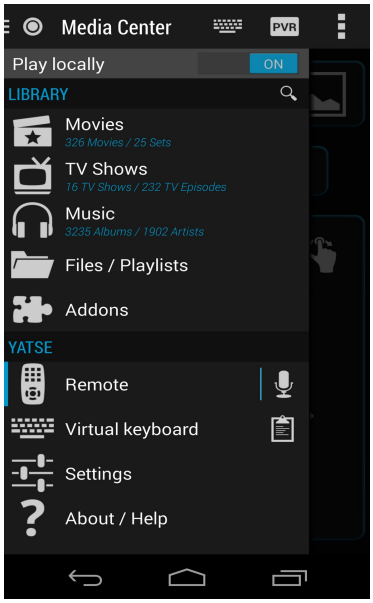
We therefore recommend you download and use **Yatse** for Andriod and **Official XBMC remote** for iOS.

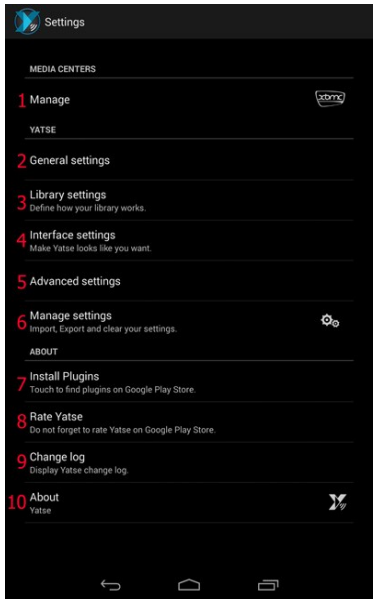
Installing Yatse Remote on an Android Device

Yatse can be downloaded free from Google play App store or from: http://yatse.leetzone.org

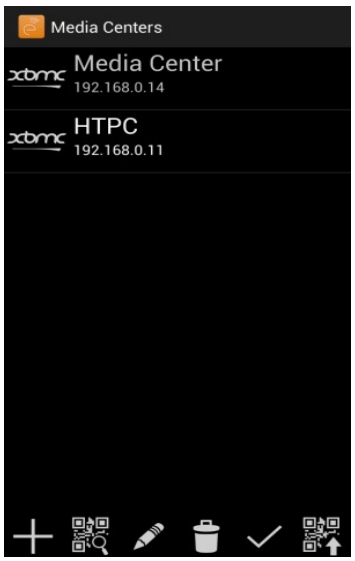
Note: The following procedures may differ slightly from device to device:

1. Download **Yatse** to the device you wish to use.
2. Install **Yatse** and press **Run** or **Launch Yatse** to start Yatse.
3. To configure **Yatse**, first access the menu. The menu can be accessed by tapping the button in the top left corner or by swiping from left to right (see below left).

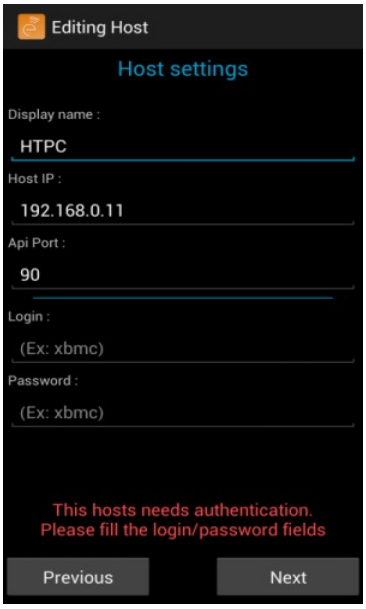


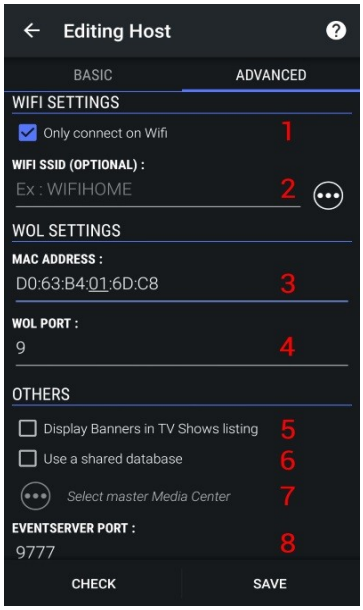


4. Press the **settings** button in the menu and then you should see the above right setting menu (this may differ slightly from version to version).
5. To manage and set up hosts, click **Manage** (under media centres). You will then see a screen similar to the one below (left).



6. From this screen you can Add / Edit / Remove and Select your media centres (see above right).
7. Click the **"+"** button to add the DAS.
8. The **Add Host** menu will appear an you will be given several host choices.
9. Select **XBMC / Kodi**.
10. Yatse should then should auto detect the DAS. It will typically appear as **XBMC (caasaudio)**.
11. Select the DAS (XBMC (caasaudio)) from the menu and then select **Add Host** it may take a few seconds to check everything.
12. Then select **finish**.
13. Select the host you want from the list and then press the **"tick"** button at the bottom.
14. Alternatively you can add a host manually by selecting **skip** and then manually entering the DAS IP address and port number (80). See below.





Notes:

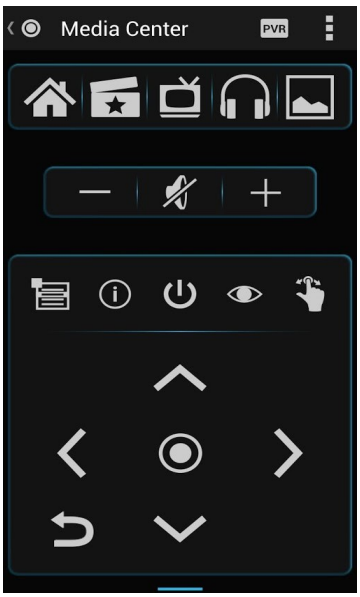
- **The DAS IP address** will pop up in the right hand bottom corner of the TV on DAS boot up (the DAS must be networked first for this to happen and a TV connected to the DAS HDMI port).
- **The DAS IP address** can also be found by using the App **Fing** on your smart phone / tablet. Alternatively if CEC is enabled on your TV, you can use the TV remote to scroll to **System** → **System info** where the IP address will be displayed.
- **Keep the login and password blank**, they are not needed.
- The DAS needs to be running before you configure **Yatse.**

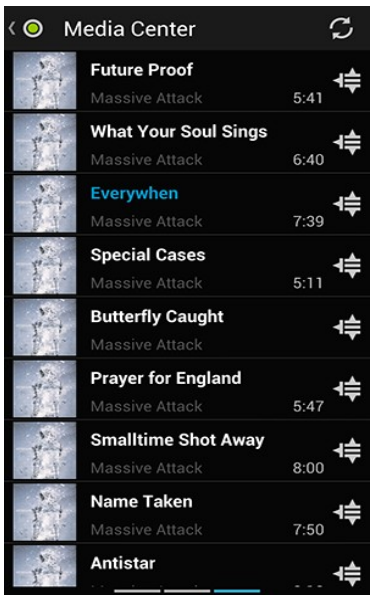
For more info please see: http://yatse.leetzone.org/redmine/projects/androidwidget/wiki/Setup

Using Yatse Remote App

The **Yatse** remote is very intuitive. All the functions can be accessed from the menu screen (top right corner):

1. Open / Run the **Yatse** App.
2. Select the **menu** screen (three small lines in the top right corner or swipe from left to right).
3. Select **remote** to bring up a remote key pad. This will allow you to navigate all the DAS functions viewable on a HDMI TV.
4. Select **Music** to bring up your whole music library (a library must to built first, see section **Building an XBMC music library**).
5. The **Yatse** App will need synchronising with the DAS:
    - Press and hold the Music icon to sync with the DAS.
    - You will see a message **starting database sync** (if you have a large music library this may take a while.
    - When finished, your music library will be stored along with all thumbnails and cover art.
6. Select **Music**, you can then scroll though your music library and select and play any tracks you wish.





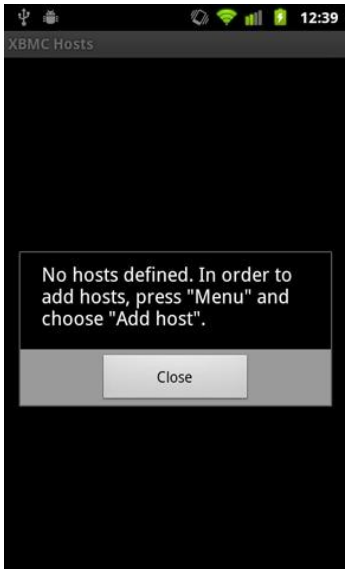
Installing Official XBMC Remote on an Apple Device

We only recommend **Official XBMC Remote** for an Apple (iOS) platform. We have designed using **Official XBMC Remote** and can not guarantee successful operation with other Apps.

Note: The following procedures may differ slightly from device to device.

The **Official XBMC remote** App can be installed by performing the following steps:

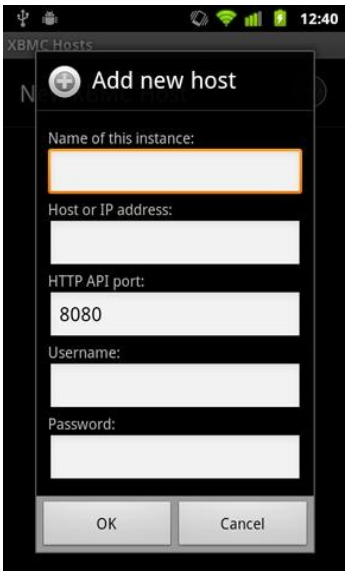
1. Make sure the DAS is networked.
2. Download (from the App store) and install **Official XBMC remote** on your iOS (Apple) smart device.
3. Open / Run **Official XBMC remote** on your smart phone or tablet.
4. Once installed and running you should see the following screen (this will differ slightly for an iPad).



5. You'll be notified that there are **No hosts detected**.
6. On an iPad: Select **Add Host** (it will be at the bottom of the box) and then select **Find XBMC**.
7. On an iPhone: Select **Settings**.
8. The App will then automatically find XBMC hosts on your network.
9. If the correct host has been found (**XBMC (caasaudio)**) then Click **Save**.
10. Then select the appropriate host from the list (**XBMC (caasaudio)**) and you should be connected.

If Auto-detect fails to find the correct host then the information will need to be entered manually, as follows:

1. Click on **Manually add a host** and dismiss the error message if you get it again.
2. You will see a form where you can define how to connect to XBMC on the Audio Server (see below).



3. Enter the following:
   - **Name:** CAAS Audio Server
   - **Host or IP:** Enter the DAS IP address (recommended), **see notes below**. Also you may be able to enter the host name here “caasaudio” although this may not work with a lot of routers.
   - **HTTP API:** 80 (NOT 8080 as shown above)
   - **Username:** (keep blank)
   - **Password:** (keep blank)

4. Click **Done**

Notes:

- **The DAS IP address** will pop up in the right hand bottom corner of the TV on DAS boot up (the DAS must be networked first for this to happen and a TV connected to the DAS HDMI port).

- **The DAS IP address** can also be found by using the App **Fing** on your smart phone / tablet. Alternatively if CEC is enabled on your TV, you can use the TV remote to scroll to **System** → **System info** where the IP address will be displayed.

- **Keep the login and password blank**, they are not needed.

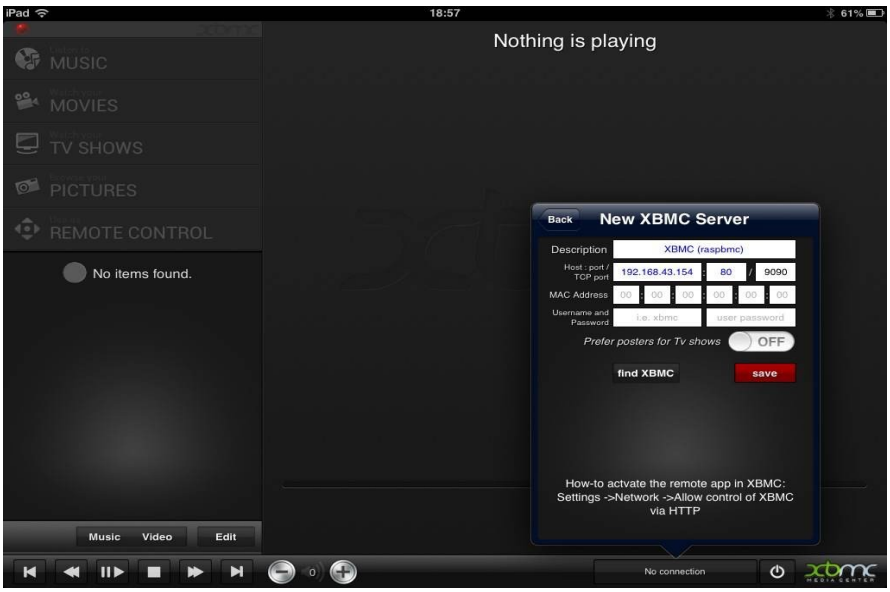
- The DAS needs to be running before you configure **Official XBMC Remote.**

Adding a Host at a later time

You can add a host / connect to the DAS at any time by navigating as follows:

1. On an iPhone:
   - **Menu** → **Settings** → **Manage XBMC Hosts**.

2. On an iPad:
   - At the bottom of the screen you should see a box that reads **No connection.**
   - Click on the **No connection** box and the **New server** screen should pop up (see below).
   - Select **Find XBMC**.
   - The App should auto-detect the DAS and fill in the IP address and port.
   - If the auto-detect does not work or finds the wrong host, then press and fill in each box manually.
   - Click **Save.**
   - Then select the host you want from the list and you should be connected (see below).

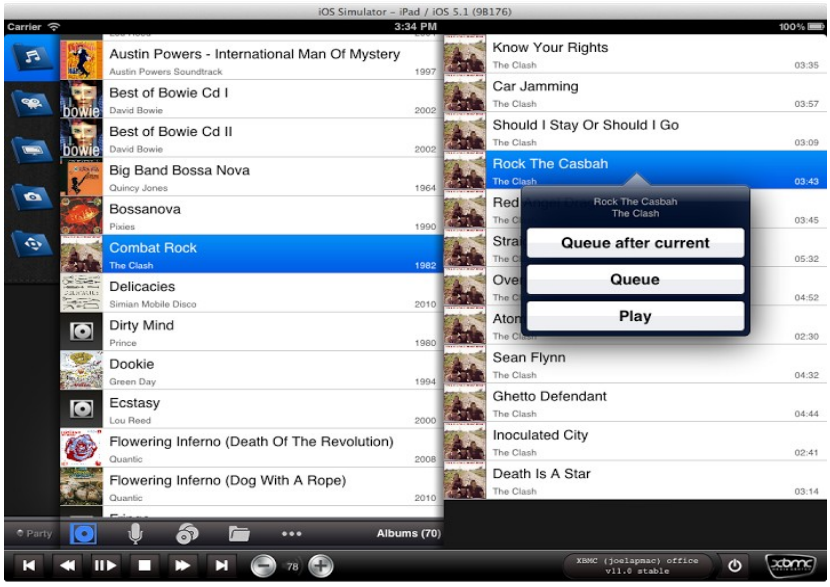


Using Official XBMC Remote

Once a library has been built (see section **Building an XBMC Music Library**) you can synchronise **Official XBMC Remote** with the DAS. Your music library will then be stored along with all thumbnails and cover art.

Official XBMC Remote can be synchronised with the DAS by:

1. Start **Official XBMC Remote App**.
2. Select **Music** from the **menu** window (left hand side window).
3. Then select either the **Artists** or **Albums** icon from the bottom of the new right hand side window.
4. Place your finger in the window, press and hold while dragging downwards.
5. At the top of the screen, you should see the message **Release to sync with XBMC**.
6. Release your finger and you should see the message **Syncing** (for a large library, this may take a while).



Official XBMC Remote Control Help

The Official XBMC remote control buttons and descriptions can be seen below:

Carrier
6:48 PM
QUICK HELP
REMOTE CONTROL
DISMISS X
ACTIVATE MUSIC WINDOW IN GUI
ACTIVATE MOVIES WINDOW IN GUI
ACTIVATE TV SHOWS WINDOW IN GUI
ACTIVATE PICTURES WINDOW IN GUI
TAP ACTIVATE HOME WINDOW IN GUI
NAVIGATE UP IN GUI
TAP SHOWS THE INFORMATION DIALOG / LONG PRESS SHOWS THE CODEC INFORMATION DIALOG
NAVIGATE LEFT IN GUI
NAVIGATE RIGHT IN GUI
SELECT CURRENT ITEM IN GUI
NAVIGATE DOWN IN GUI
TAP GOES BACK IN GUI
TAP SHOWS THE PLAYER CONTROLS (OSD) DIALOG / LONG PRESS SHOWS THE CONTEXT MENU DIALOG
STOPS PLAYBACK
RUNS THRU SUBTITLES
RUNS THRU AUDIO STREAMS
TOGGLE GUI FULLSCREEN
GO TO PREVIOUS ITEM/CHAPTER
TAP SMALL BACKWARD / LONG PRESS DECREMENT PLAYER SPEED
PAUSES OR UNPAUSE PLAYBACK
TAP SMALL FORWARD / LONG PRESS INCREMENT PLAYER SPEED
GO TO NEXT ITEM/CHAPTER

Building an XBMC Music Library

The music library information can be updated / downloaded from online servers. Note: The DAS must be networked and have a connection to the internet for this feature to work.

IMPORTANT!! Building a library takes near 100% CPU time. Any user interaction with the DAS while a library is being built may cause a reboot. Trying to play music tracks while building a library could overload the CPU and may cause a reboot.

This feature should allow more information to be displayed on the TV screen and smart device, including cover art and thumbnails.

Building a library can take a large amount of time. For example a 200GB music library typically takes 3 to 4 hours to build. The DAS must be left alone while the library is being built.

Building a Library

This can be done using a web browser, some TV CEC remote controls (Samsung works well) but is most easily done via a smart device, once **Yatse** (Android) or **Official XBMC remote** (iOS, Apple) has been installed on the smart device. The procedure to do this is as follows:

1. Select **Yatse** (Android) or **Official XBMC** (iOS, Apple) remote control (on the smart device).

2. Using the smart device remote control function to navigate while viewing on the HDMI connected TV, from the home screen select **Music** → **files**.

3. Then hover over the source you want to build a library from (this could be a USB connected device or a networked device).

4. Then on the smart device press and hold the Context menu.
   - In **Official XBMC remote** this button looks like 5 horizontal lines, see **XBMC Remote Control Help** section.
   - In **Yatse** remote this button looks like 4 horizontal lines in a square box.
   - On a Samsung CEC TV remote this is the **return** button.
   - In a **Web browser** use the **update** button.

5. The context menu should then pop up on the TV; scroll down the menu and select **scan item to library**.

6. Scanning the library may take from a few minutes to several hours, depending on the size of the music library. The status should be displayed on the TV in the top right corner.

IMPORTANT! Building a library takes near 100% CPU time. Any user interaction with the DAS while a library is being built may cause a reboot.

Please Note: Library information and thumbnails are downloaded based on the metadata information stored in your music files and not the music file name, please ensure this metadata is correct to ensure an accurate XBMC music library is created. Different file formats and external applications may have better metadata support than others.

For the library updates and downloads to activate properly please check that the D**ownload additional information during updates** is enabled in **Settings** → **Music.** This should be enabled as default.

Updating a current Library

Use this option when new songs / albums are added to your collection. Updating a library is much faster than building a new library.

Using either a CEC TV remote, a web browser, **Official XMBC Remote** (for iOS, Apple) or **Yatse** (for Android) you can instruct the DAS to re-scan the library for just new content. When doing this the DAS does not rebuild the whole library, it just scans for new files / content.

Updating a Library using Official XBMC Remote on an Apple device

1. Click the **Power** icon in the bottom right corner of the App.
2. This will bring up a menu. Select the option **Update Audio Library**.

The progress can be viewed on a HDMI connected TV. Do NOT do anything while the library is updating.

Updating a Library using Yatse on an Android device

1. Click the **menu** button (top right corner).
2. Select the **remote** screen from the menu.
3. Then click on the 3 vertical dots (top right corner).
4. Then select **scan audio library** from the new menu.

The progress can be viewed on a HDMI connected TV. Do NOT do anything while the library is updating.

Updating a Library using a CEC TV remote control

1. From the home screen, select **Music** → **Artists (or Albums)**.
2. Then while hovering over the **2 dots at the top** of the list and press the context menu button (not available on all CEC remotes, on Samsung it is the **return** button).
3. Then select **update library**.

The progress can be viewed on a HDMI connected TV. Do NOT do anything while the library is updating.

Updating a Library using a Web browser

The web interface can be accessed on port 80 by opening a web browser on your PC and typing the DAS IP address followed by :80 (e.g. ://192.168.1.14:80) into the URL bar. Alternatively you may be able to type the host name followed by :80 (i.e. http://caasaudio:80). Note: this may not work with a lot of routers.

1. To update the library press the **update** button under **audio library**.

Note: The remote control function can be used in both **Yatse** and **Official XBMC Remote** to navigate through the TV menu. Both these Apps have the context menu button available (several horizontal lines).

Important: There is an option for “update music library on power on”. DO NOT select this option, it may cause the CPU to max out and reboot.

Streaming Music from a smart phone / tablet to the DAS

This procedure differs slightly from device to device, so outlined here is a generic procedure that will be similar to that required:

1. The audio server must be networked. Connect a LAN cable between the audio server LAN port and your router.

2. Set up a connection between your smart device and the audio server. This can be done using a procedure such as the below, however this does differ from device to device.

3. Make sure your smart device is connected to your home network via WiFi. If you are not sure how to do this, information on how to do this can be found on the internet or in your smart device manual.

4. On your smart device: You first need to install and set up **Official XBMC Remote** (iOS Apple) or **Yatse** (Android). See section **Installing & Setting up XBMC & Yatse Remote Apps**.

5. Once XBMC Remote has been installed, you should be able to access your music files on your smart device (e.g. On Android: **All Apps** → **Music**).

6. Once in **Music**, there should be an icon for selecting a player, possibly at the top of the screen. Choose Select player.

7. Then under WiFi player you should see something like **XBMC**, **XBMC (caasaudio)** or **CAAS Audio Server**, select this and hit **Done**.

8. Any music files you play on your smart device should now be sent to the DAS.

9. Note this procedure does differ from device to device and for iOS systems but the information you'll need is readily available on the internet.

Viewing USB connected devices on tablets & smart phones

If you wish to use a USB attached storage device and view and access all files via a smart phone or tablet you will need to add the USB attached device as a **source** on the DAS or build an XBMC Music Library.

By adding the USB device as a **source** in a way similar to adding a **UPnP** or **SMB** server it should appear on your smart device.

On a HDMI connected TV (using either a CEC TV remote or a smart device) from the home screen select:

1. **Music → Files → Add source→ Browse.**

2. Then scroll down to **root file system** and select.

3. Then scroll down to **media** and select.

4. The USB connected device will be shown here.

5. Select the USB device.

6. The device will then be added to the source list found from the home screen via **Music → Files.**

To view the music file information on a smart device, you will need to build a library. See section Building an XBMC Music Library.

Audio Server Software Update

See section **CAAS Audio Configuration Set Up** below.

CAAS Audio Configuration Set Up

The DAS network settings can be configured under **Programs → CAAS Audio Configuration.** This procedure is outlined below:

1. Switch the DAS ON, once the audio server has booted.
2. On the TV, scroll right and select the **Programs** menu; this should give you a list of programs.
3. Scroll down to and select **CAAS Audio Configuration**; this will open the configuration window.
4. The configuration window has two parts (tabs), **Network Configuration** and **Software Updates.**
5. On the **Network Configuration** page, you can configure either:
   - Ethernet (Hard Wired) or Wireless (WiFi).
   - Whether the IP address is fixed or comes from DHCP (Dynamic Host Configuration Protocol).
   - If you are not using DHCP, IP address, subnet masks and gateway addressed can all be configured.
6. On the **Software Update** page, you can select: **Check for software upgrade**, once selected the DAS will search for any software upgrades. It is recommended to follow the on-screen advice during the upgrade process and it is recommended that you do NOT reboot or power off the unit during an upgrade procedure.

Note: Please refer to your router manual for further details about configuring DHCP and changing device IP addresses should you need to.

Returns, Repairs and Weee recycling

For returns, repairs or Weee recycling, please contact CAAS Audio at info@caasaudio.com or via the contacts page on our website www.caasaudio.com

DAS Factory Reset

Important

The factory reset function is a last resort function, only to be used if the DAS has undergone a critical failure and will not power up or reboot.

Warning !

Under no circumstances should the DAS be powered off during the factory reset function as this could result in a catastrophic disk failure and the DAS will have to be returned to the manufacturer.

Please ensure that the DAS is fully powered with no chance of the power disengaging during the factory reset procedure.

! DO NOT power the DAS OFF until the factory reset has fully finished !

Once the factory reset function is activated, all user data (play lists etc..) will be lost, as a full disk format will be undertaken followed by a full software re-install.

It should be noted, that the users music library can be backed up (i.e. exported) up to USB or network storage via the XBMC music settings menu and re-imported after factory reset in the same way. To avoid disappointment as with any system we recommend that you make regular backups of you data and music library. For more information see:

http://wiki.xbmc.org/index.php?title=Import-export_library

Initiating a Factory Reset

1. Turn the DAS OFF at the rear.

2. The reset button is mounted behind a small hole in the rear panel (see photograph of the rear panel in section **DAS Rear Panel Explained**).
   You will need to press this button using a thin object such as a cocktail stick.

3. To initiate a factory reset press and hold (for 5 seconds) the small reset button on the rear of the DAS while turning the DAS ON.

4. Release the factory reset button 5 seconds after the DAS has been turned on. The progress can be viewed on the HDMI connected TV.

The full factory reset procedure will take approximately 20 minutes to complete. Do not turn the DAS off or undertake the shut down procedure until the full factory reset has finished and the usual DAS home / start screen has loaded.

DAS FAQ

Q: Where is the remote?
A: There is no remote with the DAS, if your TV is HDMI-CEC enabled, the TV remote will operate the DAS. Additionally the DAS can be networked and controlled via smart phones, tablets, PCs etc..

There are different trade names for HDMI CEC, depending on who is the manufacturer of your TV, so it doesn't have to be stated as HDMI-CEC, see the below list:

Samsung -	Anynet+
Sony -	BRAVIA Link or BRAVIA Sync
Sharp -	Aquos Link
Hitachi -	HDMI-CEC
AOC -	E-link
Pioneer -	Kuro Link
Toshiba -	Regza Link or CE-Link
Onkyo -	RIHD (Remote Interactive over HDMI)
LG -	SimpLink
Panasonic –	VIERA Link or HDAVI Control or EZ-Sync
Philips -	EasyLink
Mitsubishi -	NetCommand for HDMI

Q: I need an remote control because my television does not support CEC?
A: You can connect the DAS to your network (via the LAN port on the rear) and use a smart phone, tablet or PC to control the DAS.

Q: Can I connect a USB WiFi adapter?
A: Yes, however some Wifi adapters are not compatible. We have had good results with EDiMax EW-7811Un.

Q: Can I install add-ons?
A: The on-screen user interface is bases on the award winning XBMC software and a number of tested and verified add-ons come pre-installed, please note the installation of additional music add-ons (such as last.fm and shoutcast) is done at the owners own risk. Please also note that any legacy XBMC video add-ons (Youtube, iPlayer etc.) are not supported and will not work, do not install them under any circumstance. There should be no need to install additional add-ons to play, steam music from your home network, or build your music library and cover art.

Q: Can I update Rasbmc or XBMC?
A: NO! Under NO circumstance update either as this will overwrite our digital interface kernel.

Q: Why can't I use a 2.5inch HDD?
A: A typical 2.5inch HDD draws it's power from the USB port. The DAS is not capable of supplying this additional power. A 2.5inch HDD will either just not work or keep forcing the DAS to reboot.

Q: What is the maximum capacity USB Pen?
A: We recommend a maximum capacity of 32GB (depending on make and model), you may be able to use a 64GB or higher, however if the pen requires more power than the DAS can deliver, it will force the DAS to reboot. If you are experiencing periodic DAS reboots this is more than likely the issue.

Q: Can I use a powered USB Hub?
A: Yes this may allow you to use higher capacity USB Pens and possibly even a 2.5inch HDD, however an un-powered Hub will not.

Q: Can I play video?
A: NO, the DAS has been designed to support Audio only and any legacy video support in XBMC is not supported.

Warranty (3 Year Guarantee)

To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the DAS. Please do not open the DAS. There are no user serviceable parts inside the DAS. Opening the DAS will invalidate any warranty offered. Servicing must be referred to qualified service personnel only.

This warranty is offered in relation to purchases made in the United Kingdom, Eire and European Economic Area (EEA) only and shall be governed by the laws [applying in the country in which purchase of the product takes place]. Consumer statutory rights applying under the laws [pertaining in the country of purchase] shall not be adversely affected by any terms and conditions contained herein. All CAAS Audio products are covered by a standard 3-year manufacturers' warranty. This covers parts and labour, subject to terms & conditions. This warranty is not transferable outside the European Economic Area.

If a CAAS Audio product is defective in normal domestic use, due to a fault in materials or workmanship, CAAS Audio will at its discretion (and subject to the terms contained herein) either repair or replace it free of charge within a reasonable time after return of such product to CAAS Audio during the warranty period. This warranty is offered to the first purchaser only and covers the cost of parts and associated labour required to correct such defects in materials or workmanship arising and advised to your retailer or CAAS Audio during a period of three (3) years from the original date of purchase.

This Warranty does NOT cover:

1. Damage to CAAS Audio products while in possession of a shipper, retailer, or consumer and not caused by defects in materials or workmanship;
2. Damage or defects caused by abnormal or unreasonable use (including repairs or alterations of products by a person or company other than CAAS Audio;
3. Damage to CAAS Audio products arising due to or from normal wear and tear;
4. Damage resulting from misuse, neglect, abuse, accidents, acts of nature, improper installation, improper removal or cleaning;
5. Damage resulting from failure to follow the instructions in the user manual or repair or attempted repair by unauthorised personnel or company;
6. Initial set-up, check-ups or charges incurred for installation of the product;
7. Any cause other than a product defect due to a fault in materials or workmanship;
8. Any product where the serial number has been defaced, modified or removed; and
9. Any CAAS Audio product purchased outside the European Economic Area.

Note: The term "Damage" includes, malfunction, deterioration and failure to meet specifications.

CAAS Audio will pay for all parts and labour covered by this warranty. You must pay all shipping charges if it is necessary to return the product to CAAS Audio or your retailer. However, if the required repairs are covered by this warranty CAAS Audio will pay for the return shipping to any destination within the UK & Eire. Whenever warranty service is required you must present the original dated sales receipt or other proof of purchase.

The equipment should be packed in its original packing. Do not return your product to CAAS Audio without consulting and approval from CAAS Audio. If you are returning any product, you should use a reputable carrier - do NOT post. CAAS Audio cannot accept responsibility for the unit while in transit to the retailer or CAAS Audio.

Please ensure that your equipment is insured by you during any transit or shipment for repair.

This warranty applies from the date of purchase for the duration of three (3) year. Under no circumstances will this change. If a product is returned for repair or servicing or other, the remainder of the warranty from the original date of purchase is the warranty given on the repair, service or other and NOT a further three (3) year warranty.